

**RISK AND RETURN ANALYSIS OF TAX ADJUSTED VERSUS
UNADJUSTED REITS INDEXES AND OTHER FINANCIAL
INDEXES**



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UNADJUSTED REITS INDEXES AND OTHER FINANCIAL
INDEXES



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ABSTRAK

Kajian ini membangunkan indeks terlaras dan tidak terlaras cukai bagi amanah pelaburan hartanah (REITs) Malaysia berdasarkan kaedah nilai wajaran dengan menggunakan data bulanan bagi 19 REITs Malaysia dari Januari 1999 hingga Disember 2014. Ianya juga menyiasat prestasi indeks REIT terlaras cukai berbanding tidak terlaras cukai dan petunjuk kewangan yang lain serta manfaat kepelbagaian REIT Malaysia, Indeks Komposit Kuala Lumpur (KLCI), Indeks Hartanah Kuala Lumpur (KLPI) dan Bil Perbendaharaan 3-Bulan Malaysia berasaskan teori portfolio moden Markowitz. Kajian ini mendapati indeks REIT terlaras cukai mengatasi indeks REIT tidak terlaras cukai, KLCI dan KLPI menggunakan variasi koefisien (CV). Bil Perbendaharaan 3-Bulan Malaysia menyediakan CV terendah dan ianya dianggap sebagai aset prestasi terbaik bagi pelabur benci risiko. Tambahan pula, REIT Malaysia didapati mempunyai korelasi positif yang rendah dengan KLCI berbanding KLPI, menunjukkan ianya mempunyai manfaat kepelbagaian yang lebih tinggi; manakala Bil Perbendaharaan 3-Bulan Malaysia adalah berkorelasi negative dengan petunjuk kewangan lain.

Kata kunci: indeks terlaras cukai, indeks tidak terlaras cukai, teori portfolio moden Markowitz, variasi koefisien (CV), korelasi



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ABSTRACT

This study develops the tax adjusted and unadjusted Malaysian real estate investment trusts (REITs) indexes based on the value weighted approach by using a monthly data of 19 Malaysian REITs from January 1999 to December 2014. It also investigates the performance of the tax adjusted versus unadjusted Malaysian REITs indexes and other financial indicators, and diversification benefit of the Malaysian REITs, Kuala Lumpur Composite Index (KLCI), Kuala Lumpur Property Index (KLPI) and Malaysia 3-month Treasury bills based on the Markowitz's modern portfolio theory. The study finds that the tax adjusted REITs index outperforms the unadjusted REITs index, KLCI and KLPI based on the coefficient of variation (CV). The Malaysia 3-month T-bills provides the lowest CV and it is considered to be the best performing asset for risk averse investors. Furthermore, Malaysian REITs are found to have a lower positive correlation with the KLCI than the KLPI, indicating that it has a higher diversification benefit. Malaysia 3-month Treasury bills are negatively correlated with the other financial indicators.

Keywords: Tax adjusted REITs index, unadjusted REITs index, Markowitz's modern portfolio theory, coefficient of Variance, correlation.



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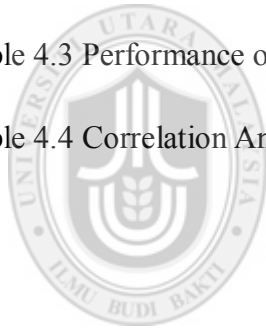
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CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Real estate investment trust (REIT) is a security investing in real estate directly and sold like a stock on the major exchanges. The traditional real estate investment trust is a closed-end fund created especially for mortgage-related assets or / and real properties (Chen & Eley, 2003). Since the REITs were introduced in the United States (US) in 1960, REITs have become a popular investment tool, which have attracted huge investment capital, especially in developed countries. With the rapid development of the REITs industry, more countries have established REITs index in order to assist and to enhance the development of REITs, as well as to attract more REITs investors. Some of these indexes are: Dow Jones US Select REIT index in the US; S&P/ASX 200 A-REIT in Australia; S&P Singapore REIT index; Tokyo Stock Exchange REIT index and Hang Seng REIT index in Hong Kong. However, there is no REIT index developed in Malaysia, although the REITs industry is gaining its popularity.

The development of a reliable, timely REITs index is significant for decision makers and fund managers. REITs index can be used as a benchmark to measure the performance of individual REIT, to provide a standard performance of a specific industrial sector or regional market, to serve as a proxy for investment such as index fund and to be used as an underlying asset for derivatives investment (Schoenfeld, 2002).

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